Welcome to Computer Science 1044
Introduction to Programming in C/C++

Instructor and Course Information

Instructor: William D McQuain
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Office: 631 McBryde Hall
Office Hours: 2:00 – 3:15 MTWRF
and by appointment

Course Description
Credits: (3H) 3 credits
Prerequisites: None. However, computer/web literacy is assumed.

Objectives:
Fundamental concepts underlying software solutions of many problems. Structured data, statement sequencing, logic control, input/output, and functions. The course will be taught using a structured approach to programming.
### Texts & References

**Required:**


**Recommended:**

*CS 1044 Course Notes*, by McQuain and Barnette, ©2002

(available from the course website)

**Other Useful Sources of Information:**

- Visual C++ Online Help
- C/C++ Usenet group: [alt.comp.lang.learn.c-c++](alt.comp.lang.learn.c-c++)

### Assignments and Weights

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<th>Item</th>
<th>Weight</th>
<th>Tentative Dates</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>8%</td>
<td>Frequent</td>
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<tr>
<td>Homework</td>
<td>10%</td>
<td>Varied, posted on course website</td>
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<tr>
<td>Programming Assignments</td>
<td>45%</td>
<td>Varied, posted on course website</td>
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<td>Midterm Test</td>
<td>12%</td>
<td>Friday, June 9</td>
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<td>Final Exam</td>
<td>25%</td>
<td>1:00 – 3:00 pm, Saturday July 1</td>
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**Quizzes**

short, typically one question, taken from the assigned reading, or from the lectures, or from current programming assignment; no makeups, some will be dropped

**Homework**

multiple-choice questions, usually relating to the syntax, semantics and use of the C++ language; late homework will only be accepted in extremely unusual circumstances

**Programs**

gradually grow in complexity; grading will be based primarily upon whether your version solves the specified problem; internal documentation and coding style may be used as a factor as well; late submissions will carry a per-diem penalty
Grade Policies

Grade Scale
The usual 10-point scale will apply (subject to any curve). A final average of 90% will guarantee an A-, 80% will guarantee a B-, and so forth.

Curve
A grade curve may or may not be employed in this course. The application of a curve is dependent upon class performance on tests and homework. The decision to utilize a curve rests entirely with the course instructor.

Cheating
Cheating on the programming assignments, quizzes and tests will not be tolerated. Student submissions for the programming assignments will be subjected to automated analysis to detect suspicious similarities. We are very good at this.

I reserve the right to demand that a student explain the logic and/or language of any programming assignment. Inability to do so will lead to charges.

Statute of Limitations
Questions about the grading of an individual assignment must be raised within one week of the graded results being made available to the class.

Class Organization

Sources for Help/Questions etc.
CS 1044 Classmates:
   CS 1044 Forum for questions
CS 1044 TAs & Instructor
   CS 1044 Listserv for announcements by instructor, etc.

General C++ Language Help
USENET Newsgroup: alt.comp.lang.learn.c-c++
   A panel of "experts" will respond to questions.
   We DO monitor the group.

Lecture Instruction
Lectures will consist of presentations, applications, problems and solutions, ideally interspersed with classroom discussion.

Lab Instruction
Lab sessions will involve a variety of assignments designed to develop skills and illustrate lecture topics.
Development Systems

Test Environments
- All programming assignments submitted are required to compile under Microsoft Visual C++ .NET 2003.
- Programs will be tested under Windows XP Professional.
- It is the student’s responsibility to ensure that his/her programs execute correctly in the appropriate environment; programs that do not will receive substantial deductions.

Program Evaluation
- Students are required to submit their source code files to the Curator system.
- Be sure to read the Student Guide to Submitting in the course notes pack. It describes how to prepare to submit a program to the Curator and discusses how the Curator scores your submissions.
- All submissions to the Curator are subject to the Virginia Tech Honor Code.

Damage Control

Backups
Students are responsible for making backup copies of all their work in this course. Loss of work due to hard drive failure is NOT an acceptable excuse. Backup copies of files on the same hard drive are not backup copies. Backup copies of files on second hard drives are also risky. Backup copies should be maintained on two separate distinct storage mediums, (e.g., hard drives and floppies).
Backup copies should be maintained until after the end of the term and students have received their course grade. (The Army lives by triplicate for a reason.)
Remember: Computer systems contain mechanical devices. Systems fail. Plan for it. It is inevitable!

Deadlines
Assignments have deadlines.
Deadlines are temperamental little beasts; hug one too tightly and it is likely to bite.
An exhaustive list of Honor Code violations would be impossible to present here, but among other things, each of the following is a flagrant violation of the Virginia Tech Honor Code, and violations will be dealt with severely (Honor Court):

• Working with another student to derive a common program or solution to a problem. **There are no group projects in this course.**
• Discussing the details required to solve a programming assignment. You may not share solutions.
• Copying source code (programs) in whole or in part from someone else.
• Copying files from another student's disk even though they might be unprotected.
• Editing (computer generated) output to achieve apparently correct results.
• Taking another person's printout from a lab printer, remote reprint printer, trash can, etc.

It is acceptable to discuss with classmates a programming assignment in a general way, i.e., to discuss the nature of the assignment. In other words, you may discuss with your classmates what your program is required to accomplish but **not how to achieve that goal using the C++ language.** In no way should the individual statements of a program or the steps leading to the solution of the problem be discussed with or shown to anyone except those people cited in the following statement.

Feel free to discuss the homework assignments and your program source code with the teaching assistants assigned to CS 1044, the instructor, or the free tutors provided by UPE. The discussion of your program source code **must** be limited to these people. Note that this specifically excludes discussions of your program source code with other students (even if they are not enrolled in CS 1044), or with tutors except for those named above. Privately hired tutors are not an exception to this requirement, nor are athletic or other tutors provided by the University.

Copies of all submitted work are retained indefinitely by the Department. Submitted programs are subjected to automated analysis for detection of cheating.

If you have any question as to how the Honor Code applies to this class, remember that:

• All programming assignments for this class must be done on an individual basis.
• Credit will be given only for work done entirely on an individual basis.
• Do not make any assumptions as to who can provide help on a programming assignment.
• All submitted work is archived. All submitted programs will be subjected to automated analysis for evidence of cheating.

Evidence indicating the violation of the policies stated above will be submitted to the Honor Court.

It is much easier to explain a poor grade to parents or a potential employer than to explain an Honor Court conviction.